

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1) (Original) A process for the production of a safety helmet which comprises an energy dispersive polymer composite sandwich structure, comprising the steps of;
 - a) introducing into a mould a first layer comprising at least one piece of fabric, a second layer comprising a pre-formed energy dispersive material, a third layer comprising at least one piece of fabric and a curable polymer material in contact with at least said first and third layers, and
 - b) curing the polymer material such that first and third fibre reinforced polymer layers are formed encapsulating the second layer.
- 2) (Original) A process as claimed in claim 1 wherein the first layer and some curable polymer material are introduced into the mould prior to introduction of the second layer and the third layer and some curable polymer material are introduced into the mould subsequent to the introduction of the second layer.
- 3) (Original) A process as claimed in claim 1 wherein the first layer of fabric is bonded to the second layer prior to introduction into the mould.
- 4) (Original) A method as claimed in claim 3 wherein some curable polymer material is introduced into the mould prior to introduction of the bonded first and second layers.

- 5) (Currently amended) A method as claimed in ~~any of claims 3 or 4~~ Claim 3, wherein the third layer of fabric is bonded to the second layer prior to introduction to the mould.
- 6) (Original) A method as claimed in claim 5 wherein at least some curable polymer material is applied to the third layer after it is bonded to the second layer.
- 7) (Original) A method as claimed in claim 6 wherein the curable material applied to the third layer is applied after the third layer has been introduced into the mould.
8. (Currently amended) A process according to ~~any one of the preceding claims~~ claim 1 wherein each of the first and third layers comprise in the range of from 1 to 4 sheets of fabric.
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Currently amended) A process according to ~~any one of the preceding claims~~, claim 1 comprising attaching a fourth shock attenuating layer to the energy dispersive polymer composite sandwich structure product.

19. (Currently amended) A process according to claim 18, wherein the fourth shock attenuating layer comprises at least one energy dispersive material.

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Currently amended) A process according to ~~any one of the preceding claims~~ claim 1,
comprising fixing a ~~fifth~~ comfort liner to the third ~~or fourth~~ layer.

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Currently amended) A process according to ~~any one of the preceding claims~~ claim 1
wherein the second pre-formed energy dispersive layer is formed from at least three
interconnecting sections.

30. (Original) A process according to claim 29 wherein the interconnecting sections
comprise a means of locking engagement.

31. (Original) A process according to claim 30 wherein the means of locking engagement is provided by chamfered abutting edges or are joined by means of a protrusion and co-operative recessed portion.

32. (Cancelled)

33. (Currently amended) A process according to ~~any one of the preceding claims~~ claim 1 wherein the energy dispersive material is polystyrene foam and the method further includes the step of applying a barrier between the polystyrene foam and curable resin to prevent chemical reaction.

34. (Original) A process according to claim 33 wherein the barrier contains a spectroscopically active compound to monitor the application.

35. (Currently amended) A process according to claim 33 ~~or claim 34~~ wherein the barrier is applied to the foam by means of spraying, dipping or brushing.

36. (Currently amended) A process according to claim 35, wherein the ~~uniform impervious barrier is~~ barrier is uniform and impervious and is formed from an epoxy adhesive.

37. (Cancelled)

38. (Cancelled)

39. (Currently amended) A helmet obtainable by a process according to ~~any one of the~~
~~preceding claims~~claim 1.

40. (Original) A helmet according to claim 39, wherein the helmet, further incorporates
mountings for at least one of the following, chin strap, visor, illumination unit,
reflector or head mounted display.

41. (Cancelled)

42. (Cancelled)

43. (New) A process according to claim 18, comprising fixing a fifth comfort layer to the
fourth layer.